

AMENDMENTS TO THE CLAIMS

Please amend claims 1, 13, and 14-16, as set forth in the listing of claims that follows:

1. (Currently Amended) A method for making a diesel particulate filter, comprising:

providing a wall-flow substrate comprising an inlet channel and an outlet channel and a porous wall separating the inlet channel and the outlet channel, said porous wall comprising an inlet wall surface adjacent the inlet channel and an outlet wall surface adjacent the outlet channel, said wall-flow substrate being characterized by a thickness between the inlet wall surface and the outlet wall surface and by pores having an average pore size between 5 micrometers and 500 micrometers;

applying a promoter oxide compound onto refractory inorganic oxide particles by forming a first slurry of the refractory inorganic oxide particles dispersed in a solution containing a precursor of the promoter oxide compound and calcining to form the promoter oxide compound and deposit the promoter oxide compound onto the refractory inorganic oxide particles, thereby forming supported promoter particles; a promoter oxide precursor and a refractory inorganic oxide;

impregnating the supported promoter particles with a noble metal catalyst to form catalyst-bearing particles;

~~calcining the first slurry to form a supported promoter;~~

~~combining a noble metal solution and the supported promoter to form a second slurry;~~

~~calcining the second slurry to form a catalyst composition;~~

~~sizing the catalyst-bearing particles to said catalyst composition having an average particle diameter of about 2 micrometers to about 10 micrometers, wherein the particle size is about 10% to about 80% of the average pore size;~~

~~applying the sized catalyst-bearing particles the catalyst composition to the inlet wall surface of the wall-flow substrate and not to the outlet wall surface, said catalyst-bearing particles being applied by applying a second slurry comprising the sized catalyst-bearing particles and calcining to cause said catalyst-bearing particles to penetrate within the pores of the porous wall to a distance less than or equal to about 25% of the thickness of the porous wall; and~~

~~calcining the substrate to form the diesel particulate filter, wherein the catalyst composition penetrates less than or equal to about 25% of the thickness of the porous wall.~~

2. (Cancelled)

3. (Previously Presented) The method of Claim 1, wherein the average composition particle size is about 20% to about 50% of the average pore size.

4. (Previously Presented) The method of Claim 3, wherein the average composition particle size is about 25% to about 35% of the average pore size.

5. (Original) The method of Claim 1, wherein the catalyst composition loading is about 1.2 g/L of substrate volume to about 122 g/L of substrate volume.

6. (Previously Presented) The method of Claim 1, wherein the diesel particulate filter has less than or equal to an about 15°C increase in a balance point temperature after aging at 650°C for 50 hours.

7. (Previously Presented) The method of Claim 1, wherein the diesel particulate filter has less than or equal to an about 35°C increase in a balance point temperature after aging at 700°C for 16 hours in 10% steam.

8. (Previously Presented) The method of Claim 1, wherein the diesel particulate filter has less than or equal to an about 70°C increase in a balance point temperature after aging at 800°C for 25 hours in 10% steam.

9-12. (Canceled)

13. (Currently Amended) The method of Claim 1, wherein ~~the second~~
~~slurry comprises a~~ the noble metal is selected from the group consisting of platinum; and
palladium; ~~and a combination comprising at least one of the foregoing noble metals.~~

14. (Currently Amended) A method for making a diesel particulate filter, comprising:

providing a wall-flow substrate comprising an inlet channel and an outlet channel and a porous wall separating the inlet channel and the outlet channel, said porous wall comprising an inlet wall surface adjacent the inlet channel and an outlet wall surface adjacent the outlet channel, said wall-flow substrate being characterized by a thickness between the inlet wall surface and the outlet wall surface and by pores having an average pore size between 5 micrometers and 500 micrometers;

applying a promoter oxide compound onto refractory inorganic oxide particles by forming a first slurry of the refractory inorganic oxide particles dispersed in a solution containing a precursor of the promoter oxide compound and calcining to form the promoter oxide compound and to deposit the promoter oxide compound onto the refractory inorganic oxide particles, thereby forming supported promoter particles, wherein the promoter oxide compound precursor comprises an element selected from the group consisting of vanadium, chromium, manganese, iron, cobalt, copper, zinc, nickel, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, and ytterbium, ~~and a combination comprising at least one of the foregoing elements; a promoter oxide precursor and a refractory inorganic oxide;~~

~~calcining the first slurry to form a supported promoter;~~

impregnating the supported promoter particles with a noble metal catalyst

to form catalyst-bearing particles, said noble metal being selected from the group consisting of platinum and palladium;

~~combining a noble metal solution and the supported promoter to form a second slurry, wherein the second slurry and a combination comprising at least one of the foregoing noble metals;~~

~~calcining the second slurry to form a catalyst composition;~~

sizing the catalyst-bearing particles to said catalyst composition having an average particle diameter of about 2 micrometers to about 10 micrometers, wherein the particle size is about 10% to about 80% of the average pore size;

applying the sized catalyst-bearing particles ~~the catalyst composition~~ to the inlet wall surface of the wall-flow substrate and not to the outlet wall surface, said catalyst-bearing particles being applied by applying a second slurry comprising the sized catalyst-bearing particles and calcining to cause said catalyst-bearing particles to penetrate within the pores of the porous wall to a distance less than or equal to about 25% of the thickness of the porous wall ; and

~~calcining the substrate to form the diesel particulate filter, wherein the catalyst composition penetrates less than or equal to about 25% of the thickness of the porous wall.~~

15. (Currently Amended) The method of Claim 14, wherein the refractory inorganic oxide particles are composed of a refractory inorganic oxide is selected from the group consisting of aluminum oxide, doped aluminum oxide, titanium oxide, zirconium oxide, and a combination comprising at least one of the foregoing refractory inorganic oxide components.

16. (Currently Amended) The method of Claim 15, wherein the refractory inorganic oxide particles are composed of a refractory inorganic oxide is selected from the group consisting of delta aluminum oxide, silica doped aluminum oxide, lanthanum doped aluminum oxide, and a combination comprising at least one of the foregoing refractory inorganic oxide components.

17-26. (Cancelled)